

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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Zavod No 1, Podberezye

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REFERENCES

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SUPERVISION

1. (The chain of command from the Soviet MinAvInd to Zavod No 1 is shown on page nine.) On paper, there were a few Soviets in charge of technical matters. Actually, these were either figureheads or acted as liaison engineers. Stated briefly, the Soviets were in charge of matters pertaining to administration and security, and the Germans directed the design work, trying to fit it into the changing Soviet requirements. (See also paragraphs 16-22.) There was, however, no one man in the Siebel Group who directed all phases of design and production as did Baade in the Junkers group. I considered all those who were department heads "good men" and not merely figureheads. None of the German supervisors spoke Russian before going to Podberezye. (Paragraphs 2-15 describe the various departments of OKB-2. Page ten is an organizational chart of the Siebel Group.)
2. The Chief Designer's (Haupt Konstrukteur) Office was responsible for the entire coordination of OKB-2 design and development activity. Actually, Ingr Roessing was primarily concerned with administrative matters, although he maintained a general knowledge of the designs and their progress. Bereznayak was primarily concerned with liaison between the Siebel Group and the Soviet MinAvInd. He did not have to go through the Plant Director. (In comparing Roessing with Baade, source commented that Baade was considered to be quite friendly with the Soviets. He was the German closest to the Kremlin; in fact, had been there once. The Soviets gave him a Pobeda for his work on the 150 airplane.)

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3. Airframe Construction (Flugzeugbau) was responsible for airframe and aircraft components design and construction but was not responsible for power plants. Roessing, assisted by Ingr Hans Heinsohn, was in charge. Frau Becker was the secretary.
4. Aerodynamics (Aerodynamik) was responsible for determining the best aerodynamic form and the coefficients thereof. They did not concern themselves with air loads except to provide aerodynamic data to the Stress Section. The first five men listed below are former Heinkel employees.

Dr Schmitz (previously head of Aerodynamics at Heinkel)

Dr Motzfeld

***Jensen - mathematician

**Fuchs

*Eulitz

***Dipl Ingr Richter (Schlieren specialist, worked as liaison man in the wind tunnel at Podberezye)

Lifschuts - calculator (Soviet)

5. Preliminary Design (Entwurfsbueró) took the Soviet requirements and, together with Aerodynamics, worked out the general configuration, performance, and some details of the major subsections of the airplane. They worked hand in hand with the detail designers as the work progressed and frequently borrowed help from the other sections. As head of this department, Guenther was primarily responsible for originating the Siebel Group's projects, but did not direct the detailed design or construction. During the war, Guenther had been the head of Preliminary Design at Heinkel. He had worked on the He-111. [Source was asked what he thought of the rumor that Guenther had contributed to the MIG-15 design. Source looked surprised and said that he did not believe it.]

***Dipl Ingr Guenther, Siegfried - Chief

Umanskiy - (Soviet) Pretended to be Chief, '49-52; was only a translator

***Ingr Benz - Project engineer on the 448 and 478

***Dipl Ingr Becker, Werner

*Dipl Ingr Scherer

**Ingr Weillepp, Otto

**Ingr Pholing

6. Personal Affairs (Personalangelegenheiten) was concerned with the personal problems and living conditions of the Germans. This office took up matters of pay, vacations, travel passes, etc. with the Soviets. In the beginning, it was also concerned with quarters and food rationing.

***Wilmsem, Paul - Chief

Dipl Ingr Butter (inventor of explosive rivets, arrested by the Soviets after his return to the Soviet Zone)

7. Design Office (Konstruktionsbueró) was responsible for the detail design of aircraft structures and equipment exclusive of engines.

Ingr Heinsohn, Hans - Chief (former head of fuselage design at Siebel, Halle)

Dipl Ingr Peltzer, Waldemar - translator

*Ingr Schurz, Edwin

*Returned to Germany in 1950

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a. Wing Design

**Ingr Noetzold, Martin - Chief
 **Ingr Ladwig
 **Ingr Kuehn, Horst
 *Ingr Lueckmann, Hans
 **Ingr Grothe, Paul
 *Ingr Grosskopf
 **Ingr Ergenzinger, Eugen
 **Christen

b. Fuel Tank Design -

**Ingr Wenzel, Rudi - Chief
 **Ingr Schleussner
 **Ingr Kabel, August
 **Ingr Buenemann

c. Electrical Section

**Ingr Albert, Hellmut - Chief
 ***Ingr Borchert, Heinz
 **Ingr Schubert, Paul

d. Fuselage Design

**Ingr Balluff, Hellmut - Chief
 ***Ingr Mehl, Erwin
 *Wennrich, Leo
 **Feyerabend, Hans
 **Troeger, Herbert
 **Knoll, Herbert
 *Haak, Siegfried
 *Roloff, Gerhard
 *Haul, Hans
 *Boldt, Hans

(I was employed in this section of the Design Office)

8. Stress Analysis (Statik) calculated the strength of structural parts. They also calculated the airplane center of gravity based on the weights of individual parts as calculated by the respective detail designers. Part of the Stress Section supervised and ran static tests. Ingr Neumann was responsible for air load calculations. He was the only German who could prepare an analysis directly in Russian, in spite of the fact that he could speak hardly a word of the language. The only Soviets in this section were calculators.

Ingr Heinze - Chief (In Halle, head of fuselage and flight controls stress analysis)

***Dipl Ingr Michalek
 *Dipl Ingr Machill, Hans
 ***Ingr Herm-Meyer
 **Ingr Fischer
 **Ingr Fiedelschuster
 *Ingr Scholz
 ***Ingr Neumann - Air loads (Lastannahme)

For Test:

***Dipl Ingr Weber
 ***Ingr Maul, Kurt

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9. Vibration Analysis (Flatterbuero) was responsible for all calculations pertaining to aircraft vibration. The group also supervised the vibration test of the 346 airplane and the building and testing of the 1:20 wind tunnel model [described in []]. The Chief, Dr Thielemann, was a "good man". During technical discussions, it was evident that source considered Dr Thielemann to be one of the best when it comes to vibration analysis. He had formerly worked for Siebel in Halle as a stress man and later as a vibration analyst. In this section, there were no Soviets except calculators.

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Dr Thielemann - Chief

**Dipl Ingr Dietze, Fritz

**Dr Sander (formerly "Studienrat")

10. 346 Project Engineer (Typenleiter) and Flight Test (Flugerprobung). As project engineer, Rauschen was responsible for coordinating all design, construction, and testing on the 346 airplane. (The 466 and 478 Project Engineers came under Preliminary Design.) After Rauschen went to Germany in 1950, the group handled flight test work. There were no Soviets with any authority -- too much responsibility.

*Rauschen - 346 project engineer

Dipl Ingr Ziese, Wolfgang - chief pilot

*Motsch, Hans - pilot

Treuter, Karl - pilot

*Ingr Jakob

Szschuka - maintenance chief (Monteur)

Steek - radio specialist

**Zuelke - ass't radio mechanic (son of Zuelke in Design, Tool and Jig Building)

**Kniepstaedt - charge of refueling operations (father in OKB-1)

11. Measurement Techniques (Messtechnik). There were two sections in this department, a laboratory and an experimental shop. They were primarily responsible for test instrumentation methods to be used in either laboratory or flight tests. They also worked with radar, but I believe this dealt only with reworking and improving old German sets. There was a complete X-ray machine that was never used. I do not know anything about Dr Wehde's background except that he was not in the aircraft industry prior to 1946.

Dr Wehde, Heinz - Chief

Rabinovich (a Soviet; theoretically he was chief and took credit and contributed nothing.)

***Scheil - theoretical mathematician

**Limbach

**Manthey, Rudi - radar specialist

*Dipl Ingr Raack - X-ray specialist

*Reinlaender

***Steidle - designer

Ingr Preuss - instrumentation specialist for tests other than flight tests

*Hellrigl, Hans

**Walter

Experimental Shop:

**Nikolaus - foreman (Obermeister)

**Steek, Eitel - leadman (Meister)

**Banse - leadman (Meister)

**Schmidt - leadman (Meister)

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**Bormann
 **Napiralla
 *Glocke
 **Neumann
 *Brandel
 *Henze
 *Dalhelm
 Kniest
 **Endert
 *May

12. Power Plant (Triebwerk) Group spent their entire time working on the design and testing of liquid rocket engines; primarily the "Walther Ofen" for the 346 but also on some development work on a small engine planned for the M-100 research missile. There were three sections in this group: design, experimental shop, and test stand. The only Soviets were draftsmen.

Ingr Schell
 Ingr Ufer
 ***Ingr Mueller, Rudolf
 ***Ingr Winter
 **Dipl Ingr Mueller
 Schenk
 **Raack - design leadman
 Kuenzel
 **Schoene
 *Luksch
 **Beth
 *Pantecker, Heinrich
 ***Kaul
 **Sparrer - mathematician
 **Michaelis

Shop and Test Stand:

*Koslick - Obermeister
 **Krambo, Willi - Obermeister
 **Jocke, Hermann-Meister
 **Kilian - installations mechanic (Schlosser)
 **Golz
 *Lindemann
 **Janke
 *Sittka
 **Jahnke
 **Goll (or Koll) - installations mechanic (Schlosser)
 **Zschirne

13. The Chemical Laboratory (Chemie) was primarily concerned with the developments of liquid rocket fuels and the tank materials and sealing compounds to withstand the fuels. They also did chemical analysis for both the Siebel and Junkers Groups. None of the German personnel in the laboratory were Siebel men and, therefore, I have no information regarding their backgrounds. There were no Soviets in the laboratory -- no credit to be obtained.

Dr Dunken - Chief
 *Emmerich - (Chief before he went to Germany in 1950)
 *Dr Daniel
 **Dr Brumeister

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**Dr Jahnke
 *Dr Hahn
 **Tybus
 *Henkel
 *Keil
 **Rudat

11. Tool and Jig Building (Vorrichtungsbau) was a joint operation of both the Junkers and Siebel people working together. The Siebel jig builders were primarily concerned with their own projects and worked as a unit when they had sufficient work to do. At other times, they helped out with the Junkers' work. The only Siebel people working after September, 1951, were the tool designers who were working on the 150 production tooling drawings. The first concern of all jig builders was to make tooling necessary for the limited manufacturing done at Zavod No 1. In addition, design drawings for tooling necessary for mass production were made and given to the Soviets.

Design:

Stollber, Gerhardt - Chief
 *Geroisch
 *Thomsen
 Zuelke

Shop:

Tornak - foreman (Obermeister)
 *Eichler
 *Schirioth
 **Michaelis
 **Suiski

15. The shops were also a combined operation similar to that described for jig building.

a. Machine Shop and Equipment Assembly (Mechanische Werkstatt und Schlosserei)

I Ingr Schumann, Herbert - shop engineer
 Ingr Ruffert, Oskar - shop engineer
 **Naumann - Scheduler (Vorbereiter)
 *Elste - Scheduler (Vorbereiter)
 **Hermann - foreman (Obermeister)
 **Juenemann
 **Friedrich
 **Brode
 ***Kolar
 **Meier - equipment assembler (Schlosser)

b. Assembly (Montagehalle)

*Hagemann - foreman (Obermeister)
 **Geisler - foreman (Obermeister)
 **Pichutta, Ernst - foreman (Obermeister)
 **Oblonscheck - foreman (Obermeister)
 **Reuter - foreman (Obermeister)
 **Klemann - leadman (Meister)

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*Krause - tinker (Klempner)
 **Winkler - tinker (Klempner)
 *Birkner - tinker (Klempner)

c. Sheet Metal Shop: (Klempnerei)

*Keller - foreman (Meister)
 **Grohmann - tinker (Klempner)
 **Scheller - tinker (Klempner)

d. Woodworking Shop (Tischlerei)

*Grieshaber - shop engineer (Betriebsingenieur)
 **Cornelius - foreman (Obermeister)
 **Kilian
 **Zischeski (?)
 **Wangemann
 **Roehling
 **Brömmel

e. Static Test (Bruchversuch)

*Schneider - leadman (Meister)

f. Plastic Shop (Flexi-Abteilung)

**Zeh, Hans

g. General Helper (Hilfskraft)

*Gotschla

DESIGN PROCEDURE

16. On initiating a project, the Soviets were very vague about their requirements. For the 478, they simply said that they wanted a very fast interceptor with lots of armament. After the first sketches were made, they got more specific in their requirements and asked many questions as to why such and such a design was used. The Soviets contributed no design data at all.
17. Preliminary Design made 1:20 three-view drawings and 1:10 sectional views. As the new design progressed, they worked closely with the detail designers. To assist both preliminary and detail designers, a mockup of the 478 cockpit was built. Its attitude could be varied to check pilot comfort and visibility.
18. Detail design drawings were first made in pencil and, when the design was fixed, they were traced in ink. 478 drawings were made with notations in Russian. Earlier drawings were translated from German into Russian. The drawings were signed only by the designer and his immediate supervisor. Soviets signed drawings only if they happened to be the detail designer of that particular part. Roessing signed only the Project Book (Mappe). This Project Book contained photographic reproductions of the most important drawings. (Drawings of individual parts were not included), calculations, and test data. The original copy was in German, but it was also translated into Russian.

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The drawings on the 466 and earlier designs were made according to the German system. The 478 drawings were made according to the Soviet "system". The Soviet "system" was a mixture of German and American, but the engineers were unable to get the Soviets to say exactly what they wanted.

20. The designer also calculated the weights of the individual parts and sub-assemblies that he designed. The airplane center of gravity was calculated by the Stress Section, using the figures given them by the detail designers.
21. Stress calculations were made according to the RLM system (Reichs Luftfahrt Ministerium). Airload calculations (Lastannahme) were made for various flight conditions. I do not know the "g" loading to which the 478 was designed, but recall that the maximum elevator hinge moment was 55000 kgm. For each individual part the load (Kraft, P) for the most critical condition was multiplied by a safety factor to get the design load (Belastung). The safety factors were (per RLM) 1.8 for the fuselage and wings, 2.0 for landing gear, and 2.4 for flight control linkage.
22. For aluminum parts, ultimate tensile strengths were used in the calculations. For steel, the yield strengths were generally used. Ultimate or some percentage of ultimate was often used when a steel part was either not critical or the saving in weight was worth the cost of a special static test to prove the part. The results of all static tests were required to equal the design load (Belastung).

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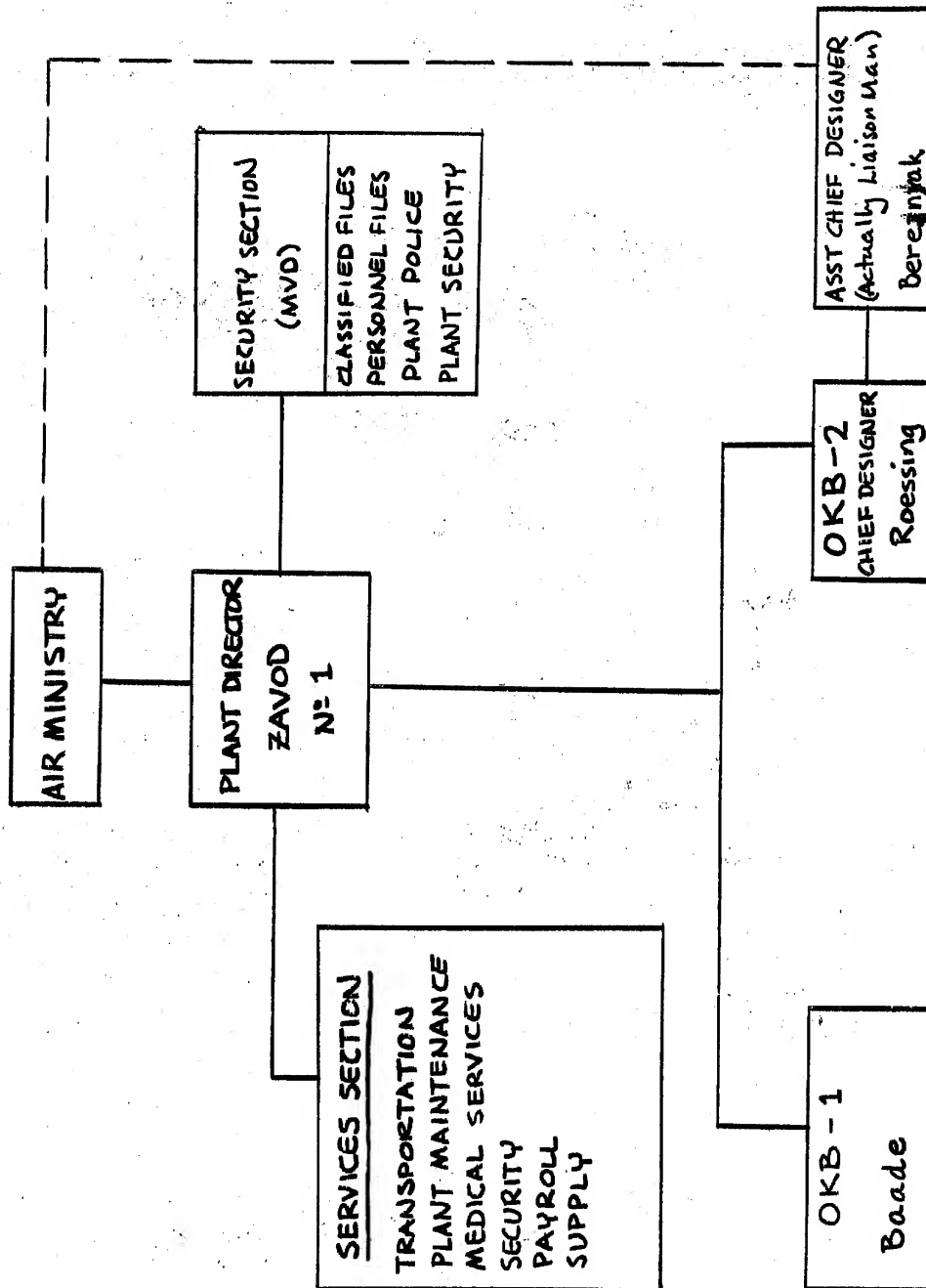
Comments: In contrast to Source's amazing knowledge of technical matters, he was extremely reluctant to discuss personalities and professed little knowledge of the backgrounds of the various technicians. This, he said, was due to the fact that many of the key people had come from Heinkel or some other organization and he did not know them prior to 1946. He knew very few first names. Only in a few instances did he know whether persons had engineering degrees or not, saying that it did not make any difference as long as a man could do the job. He never made a derogatory remark about the abilities of the Germans and seldom had anything good to say about the Soviets. He was often moody and discouraged, which is understandable considering the fact that this is the fourth time in six years that he has made a new start. Source's attitude was improved only by switching the conversation to technical or political discussions. Statements concerning various persons' abilities or their influence in the designs were picked up largely during technical discussions and not often in answer to direct questions. It is believed that the information on people and organizations is accurate in so far as available. It is doubtful if further interrogation would add much to that contained above. Source was unable to prepare an organization chart for the Junker's Group —

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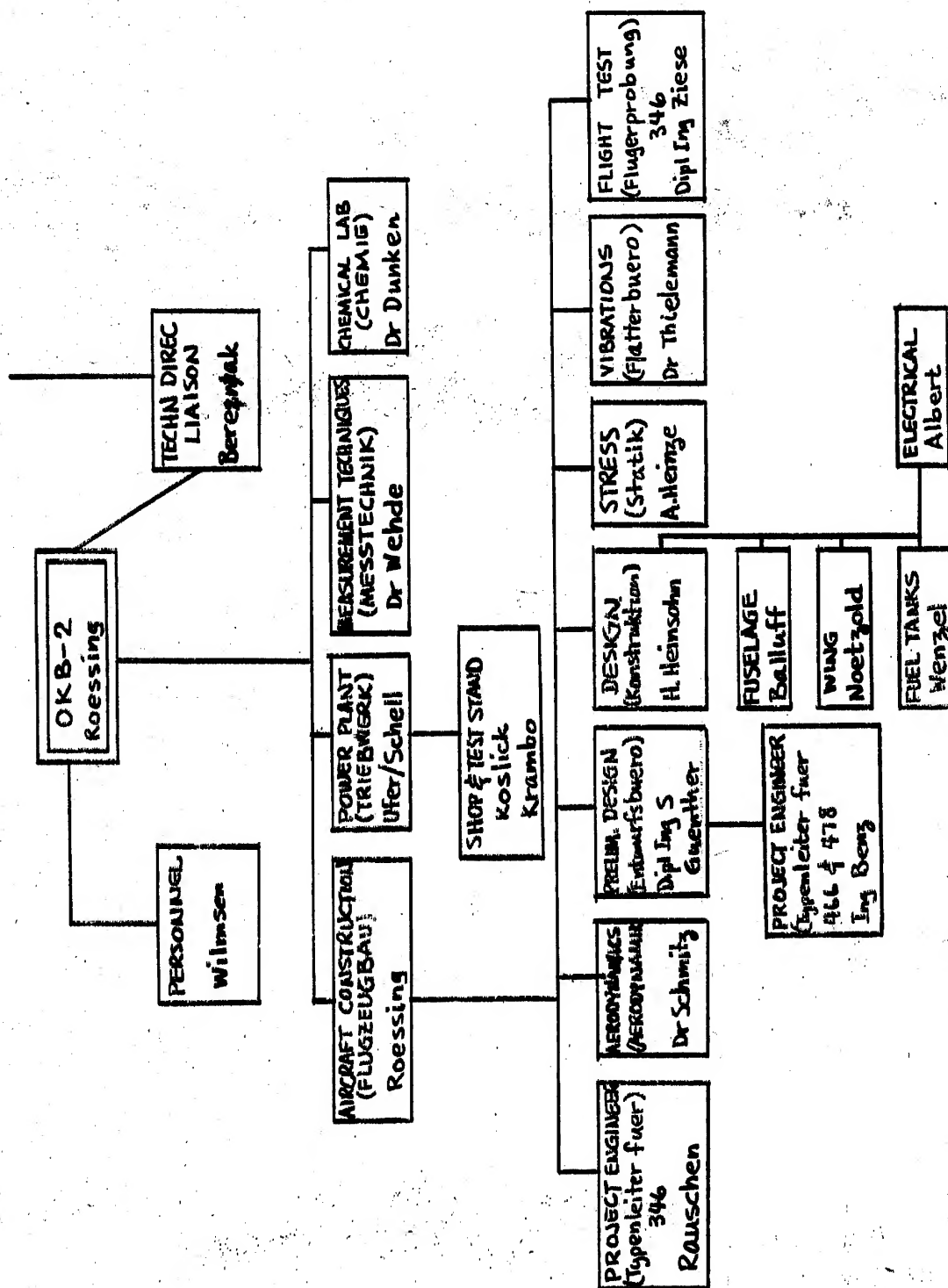
ORGANIZATION CHART showing ADMINISTRATIVE
SUPERVISION of ZAVOD No 1 - PODBEREZME-USSR

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Reference: EG-211

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ORGANIZATION CHART-OKB 2 - ZAVOD No 1 - PODBEREZYE - USSR

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